

Documentation Repository

The Contractor operates the Documentation Repository, located in Building 4491. The Repository maintains documentation in a variety of formats, including paper, microfilm, and digital. The Repository currently maintains over one million engineering drawings, technical reports, specifications and standards, manuals, program schedules and other documentation in support of MSFC Programs, Projects, and Offices. The online Service Request System (SRS) is utilized to receive, track, and approve the Repository services. The Contractor provides comprehensive document scanning, conversion, and content management services. These services include high-quality document and microfilm scanning, CD/DVD production and duplication, a document distribution service and database, records management support and records management database, and an electronic document submittal service.

The contractor maintains and provides technical support for the Documentum-based Repository Electronic Documentation Management System (EDMS), which is utilized for the storage, management, and online retrieval of technical and administrative documents, engineering drawings, and other information content. The EDMS servers and storage systems are maintained by the NASA Data Center in Building 4663. EDMS user accounts, managed through the NASA Account Management System, are available for all Center employees upon request.

The Contractor supports a wide range of Repository technical documentation and EDMS content management customers. Supported organizations include, but are not limited to, the Shuttle Propulsion Office, Ares Project Office, Engineering Directorate, Safety and Mission Assurance Directorate, Office of the CIO, Office of Center Operations, the Office of Strategic Analysis and Communications, and the NASA Technical Standards Office. The Contractor also provides extensive content management services for MSFC Records Management, MSFC Directives Management, MSFC Forms Management, and the MSFC Scientific and Technical Information (STI) Offices.

Tour of Documentation Repository Facility:

- Work Order Desk
- Microfilm Aperture Card Files
- CD/DVD Production and Duplication
- Reports and Specifications/Microfiche files
- Document Receiving, Distribution, Indexing
- Records Management Support Services
- EDMS Support, Document Scanning, Conversion, and Data Migration Services

Imaging Services

Marshall Imaging Services provides a wide range of services. They are primarily located in building 5353, with personnel in 4200 and the Test Area.

Photographic documentation is provided from exhaustive documentation of lab or field-testing to official NASA personnel photos and high-quality digital images for distribution to news media, and public outreach.

Still photographers, as well as videographers document many of the technology research elements, significant testing milestones and hardware studies conducted at NASA Marshall.

Photo Lab

Imaging Services is a full service photographic production lab, which provides a cost effective method to meet the Still and High-Speed Motion Picture needs of the Marshall Space Flight Center.

Still Photographers record on digital media.

Every aspect of the research and development, engineering testing, special events, VIP tours and awards presentations that occur at the center are photographed. Photographers also are required to travel to other NASA Centers to provide Imaging Services, such as the documentation of Shuttle Launches and Space Flight Honoree events at the Cape, or engine testing at Stennis Space Center in support of MSFC's mission. High quality "Outreach" images are produced primarily for public relations web sites and the Media Office.

The Photo lab provides digital photo production including image enhancement and electronic distribution. Photographs are printed from 35 mm negatives and digital media. Print sizes range from 3x5 inches up to 44 inches wide.

Conference Room Support

Images Services schedules conference facilities located in Morris Auditorium , and P110 in building 4200 and operates the facilities, including the audio/visual equipment.

Test Area Support

Imaging Services operates video and recorder equipment in support to test stand activities. The video equipment supporting these activities are provided via a combination of fixed installations with various configuration combinations and with setup/breakdown coverage's dependent upon the scope of the test.

The high-speed film group uses sophisticated film and digital cameras and lenses to document engine and materials tests. Cameras capable of recording up to 10,000 frames per second are used in order to capture extremely small periods of time necessary in engine test analysis. All of the film shot during these complex tests is outsourced to outside vendors.

Imaging Services provides high-speed film recording, high-speed video recording (~500 frames per second) and still photography for the various test stands at MSFC. This includes buildings 4670, 4699, 4626, 4520, 4522, 4530, and 4540. This support includes camera set-up, cabling and explosion proof enclosures for hazardous environment, and high-speed film recording during critical test activities. Recording is provided on both high-speed film and (where applicable) high-speed video equipment.

Imaging Services provides low speed video recording and display for the various control rooms throughout the MSFC test area, which includes building 4674, 4583, 4541, 4561, and 4570. This support includes camera and recorder set-up, cabling and explosion proof enclosures for hazardous environment, and camera and recorder operation during critical test activities. This includes both regular color cameras, as well as infrared video cameras. Recording is provided on standard VCR equipment. Video display is provided on standard video monitors of various sizes.

Marshall Computing Systems

Marshall Computing Services (MCS) currently manages approximately 1000 servers. The systems execute various administrative, business, engineering and scientific applications for customers across the Marshall campus. The majority of the 1000 servers consist of approximately 785 Beowulf clusters used by the Engineering Directorate for Fluid Dynamics computations.

Most of the systems managed by MCS reside in the NASA Data Center (NDC, Building 4663) while others are located in laboratories and other rooms across the campus. Today, we'll tour rooms B107 and C260, both which are located in the NDC.

Room B107 (Systems shown may vary)

Show Documentum

Show Marshall Business Application System (MBAS)

Show IEC DDMS (ED03 Windchill server)

Show MCS SAN Storage

Show MCS Backup

Show Silo

Room C260 (Systems shown may vary)

Show Beowulf Clusters

Show Engineering Compute Systems (ECS)

NASA INFORMATION SUPPORT CENTER (NISC)

This is the NASA Information Support Center (NISC), which supports 7,000 end users and is known as the Marshall Space Flight Center Help Desk. This facility is located in building 4629 at MSFC. Bldg. 4629 is approximately 7050 square feet. The facility has been designated as Mission Essential Infrastructure (MEI). All electrical power is backed up by UPS with a supporting generator system. The facility has the capability of voice and video teleconferencing in the conference room. The projection system is made up of 8 plasma screens and 2 DLP projectors that are controlled by a video switching system. There are approximately 45 workstations. Access to the facility is restricted to authorized personnel,. Doors are alarmed and key card controlled from the NASA Protective Services Office.

The NISC provides a centralized source of information for problem management, asset management, resource utilization, configuration control and operational status. The NISC provides support for all local services at MSFC with a single source of assistance, support and problem resolution for customer issues, 24 hours per day, seven days a week.

The NISC is responsible for all aspects of trouble ticket processing; major outage notification. The NISC also monitors local weather and initiates severe weather warnings and notifications for the MSFC community; prepares and publishes a daily major outage report on a website; and provides after-hour telephone support for the MSFC Utility Control system, voice conferencing, , MSFC Emergency Operations Center, the MSFC Center Director after hour contact center. Other responsibilities include notification of MSFC management in the event of personal injury, hazardous spills, bomb threats, other incidents and emergency plan support for threats, and air pollution.

Computer Telephone Integration

To handle the call volume, the NISC utilizes the Aastra Intecom Centergy Manager system. Centergy Manager, provides call routing, management functions and reporting.

Remedy Trouble Ticket System

The NISC uses a trouble ticket system called Problem Management and Dispatch System (PMDS) that is Remedy based and has custom schemas, filters, active links and C-code routines for the MSFC environment.

Alternate Emergency Operations Center

The NISC provides notification alert services for all emergency events and situations on MSFC. It also serves as the Emergency Operations Center for MSFC during non-prime hours. It provides severe weather monitoring and off-hour employee alert service.

First and Second Level Support

The NISC is a first, with some second, level Help Desk providing assistance to call-in customers for a wide variety of concerns and issues. The NISC analysts refer customer calls that require specialized assistance or require a technician to physically visit a customer to the appropriate maintenance agency for resolution.

One Stop Service

The NISC provides a single source of customer assistance for all services under the direction of the Center Operations (CO) Directorate. One Stop Service includes all MSFC housekeeping services such as facilities maintenance and repair, utilities, graphics, central reproduction, property management, shipping/receiving, and transportation.

Tape Backup Storage Area

The facility's protective area houses the backup tapes for the Center/Agency services located at MSFC.

On average, NISC personnel handle approximately 7,000 calls per month and issue approximately 1,300 trouble tickets per month.

The contractor will be responsible for the daily operations of the facility, staffing the consoles with personnel training in the respected areas, and monitoring all the services identified.

Reproduction Facility Site Tour

The Printing Office and Reproduction Services supports all MSFC organizations, programs, projects, and on-site contractors to facilitate the performance of Center roles and missions. These services are provided in accordance with Title 44, Public Law 102-392 and Section 207. We also follow the NASA Policy Directive 1490.1, the Joint Committee on Printing (JCP) Printing and Binding Regulations, and apply the Government Printing Office Quality Assurance Through Attributes Program (QATAP).

Central Reproduction, located in Building 4200, Room G34, and large format B&W duplication in Bldg. 4491 provide duplication, binding and finishing services from hard copy or electronic submission. Customers use the on-line service request system (SRS) to request B&W duplicating and color duplicating services.

The services include, but are not limited to, black and white duplication of (duplexed or simplex) standard documentation and large engineering documents (simplex only) up to J-size; and color copying of standard documentation up to 12" x 18" (duplexed or simplex). Binding for B&W and Color products includes: side stitch, stapled in upper left, saddle stitch, adhesive-tape perfect binding, three-hole drill, metal fasteners, GBC-punch binding and comb-punch binding. Approximately 85% of the work is requested for and performed in less than one day. When the work requested exceeds the in-house capability or the JCP limits, the contractor assists the Printing Officer in procuring the work through the Government Printing Office Atlanta Regional Office.

Presently, we have two DocuTech 6115 for B&W duplication (one has Signature Booklet Maker attached) with two scanners and two FreeFlow Document Assembly workstations. We have two DocuColor 6060 for Color duplication with two Fiery controllers running Command Workstation software. Most binding processes are off line and we have a drill machine, stitching machines, guillotine cutter, automatic folding machine, Comb punch machine and inserter, and a MagnaPunch for GBC. In Bldg. 4491 we have a Xerox 8855 DS B&W large format duplicator with a network controller and PowerFolder attached.

Telecommunications Services

The current MSFC Private Automatic Branch Exchange (PABX) switch is an Aastra Intecom PointSpan 6880. This unit was installed in 2003. MSFC's Aastra PointSpan is configured with approximately 12,000 active ports in 38 cabinets. There are currently approximately 2400 digital ports and approximately 9600 analog ports. This switch can expand to over 100,000 full ports. Approximately 1000 ports are located off site. The PointSpan has two processors and four cabinets located in building 4207 and 4649. The other cabinets and locations are connected to building 4207 and or 4649 via fiber or copper cable. There are 23 telephone nodes located in buildings across the MSFC campus and a few offsite locations. We have 33 total PRI spans providing local and long distance dial tone.

The voicemail system at MSFC is a VMX 300 XL Voicemail System. MSFC supports approximately 10,000 mailboxes. The voicemail system is currently being replaced with a new VoicePlus system. The installation should be completed during March 2009.

The MSFC Central Distribution Center (CDC) is the focal point for all audio/video, intercom, fiber, and local data circuits in and out of the MSFC campus and also between most buildings. Main and intermediate distribution frames support MSFC Emergency Warning System (EWS), Center-wide Distribution (cable TV system) and Television Studio distribution functions including downlinks/uplinks. Satellite receiver equipment and intercom systems also terminate in this area. MSFC Cable Plant Services supports all outside cable plant media and all fiber optic media support. This includes all installation and maintenance support along with field location support. MSFC has 30,700 circuit miles of copper and 2,730 circuit miles of fiber cable in its Cable Plant System. The underground distribution system serving the cable plant is comprised of 310 manholes and over 18 miles of ductbank and serves over 150 MSFC Buildings. The cable plant contractor is required to maintain an Asbestos Crew which installs various types of wiring (data, telephone, AVS, EWS, etc.) inside buildings that contain asbestos fibers. The Asbestos Crew is required to undergo annual training to certify ability to work in above ceiling asbestos areas.

The Emergency Warning System (EWS) at MSFC is an interactive audio system that provides both prerecorded and live announcements to all MSFC facilities, whether they are onsite or offsite. The MSFC EWS is utilized to warn personnel of potential threats to safety such as weather related watches and warnings. The system is capable of delivering live, recorded, and prerecorded announcements, across the MSFC campus and can deliver repetitive playback of recorded and prerecorded announcements. There are approximately 350 internal EWS power amplifiers with respective batteries and feedback modules located in buildings around the MSFC campus. There are 9 external locations including 35 amplifiers with respective batteries and feedback modules, located throughout the center. Individual twisted pairs and multi-mode fiber provide connection to and from the distribution and monitoring systems in 4207 and each power amplifier feedback device.

MSFC operates a Government-owned Motorola Smartnet Trunked Radio System. This digital radio system provides clear and encrypted operation on 12 bidirectional channels in the 406 to 420 MHz range. In compliance with Federal mandate, this system is shared with Redstone Arsenal. MSFC supports approximately 1350 radio units (650 NASA and 700 RSA). The MSFC Radio system supports 8000 individual ID's and 2000 talk groups. Currently 223 talk groups are assigned.

The telecommunications services contractor provides full engineering and operational support for over 320 electronic equipped conference rooms across MSFC. This support includes installation and maintenance support for projectors, audio systems, video connectivity, and electronic interface inputs. The contractor also schedules and operates specific 4200 and 4203 conference rooms.

The telecommunications group at MSFC is also responsible for the telephone system, voicemail system, trunked radio system, EWS and cable plant at Michoud Assembly Facility (MAF) near New Orleans, Louisiana. The systems at MAF are the same type systems in use at MSFC, except on a smaller scale.

Television and Video Services

Television and Video Services provides comprehensive services for Marshall Space Flight Center, NASA, general public, local and national media, national institutions, museums, members of Congress, and other government agencies. Television and Video Services is primarily located in building 4207.

Services include scripted and produced video productions, live shots, video files, live “on location” event coverage using a remote truck facility, and documentation of significant events. Television and Video Services also supports the Digital TV (DTV) Working Group as the test bed center of the Agency’s DTV and high definition (HD) transition.

Edit Suites

Television and Video Service provides a full production facility. There are four Final Cut edit suites; each suite is capable of SD and HD non-linear editing. Television and Video Services has a 27 terabyte SAN for editing.

Launch system

The Launch HD File sharing system is being tested and maintained for the Agency by Marshall’s Television and Video Personnel. This system allows Marshall to send HD content to the other centers.

VISAR

Television and Video Services uses the VISAR to support local, national, and federal law enforcement Agencies. VISAR is a state of the art image enhancement software system. It is also the backup system to enhance Shuttle Launch footage. The VISAR system is used to enhance audio, video, and photograph. One must be VISAR certified for the corrections to hold up in Court.

Production Control Room

The Production Control Room is used to switch multi-camera events in Morris, Building 4316, the Huntsville Operations Control Center (HOSC), and the Payload Operations Control Center (POCC). It has full graphic capability.

New Media Lab

The New Media Lab is the test area for new and emerging technology. Currently, the New Media Lab is being used to test and develop new webcast and Podcast content in different digital files: wmv, flv, QT, and mov.

Tape Ops

Tape Ops. is where all the content is ingested in the editing suites and where content is copied to a variety of formats. Currently, we provide content in VHS, DVD, SVHS, Beta SP, DVCAM, HDCAM, and DVCPRO. Tape Ops. is also the place for recording and playback of the Shuttle Mission content. This content is provided to the Shuttle Analysis Group here at Marshall. Television and Video Services has both SD/HD cameras: HDCAM 1080i, DVCPRO 25/50 1080/720, and Panasonic Solid State Acquisition P2-1080/720.

Library

The library is extremely important to Television Services. Television and Video Services are in the process of researching and developing a digital archiving system. Currently, the library is logged and maintained in Remedy. Content is maintained in 4207 and in the vaults in 4353.

Tech Control Room

Tech control is the heart of the whole system. All signals go into and out of this room. It is a mixture between SD and HD equipment. The Engineering personnel design, install, test, and document new systems. The Launch HD Telestream system is being tested and maintained for the Agency by Marshall's Television and Video Personnel.

Studio

Television and Video Services provides a full multi-purpose studio. It is capable of a four-camera set-up. It has a green screen. The studio is used for press briefings interviews. The studio is also equipped with a 12 foot Jib Arm. It is equipped with a full lighting grid.

Audio Control Room

The audio control room is equipped with a 24x8 sound mixer and various outboard gear. The outboard gear is used for audio enhancement. It has a computer edit and a PC that works as an auto workstation. An audio booth is used for sound narrations.

Loaner Equipment

Television and Video Services provides Prosumer cameras and equipment for Marshall employees to document events that do not need full broadcasting equipment support.

Engineering Room

The Engineers work in this area to do bench repairs and preventative maintenance.

Production Truck

The Production Truck is used as the mobile remote production facility. It is SD analog. It is capable for multi-camera switch productions with graphics.

Graphics and Publications Services

Graphics/Publications Services are located in building 4200, rooms G26A, B, C, D, and E, G28, and 522A, and collocated dedicated graphic services are located in other buildings throughout the MSFC campus. The on-line Service Request System (SRS) is utilized to receive requests and track these services.

Graphics/Publication Services support all MSFC organizations, programs, projects, and on-site contractors to facilitate the performance of Center roles and missions. These graphics and publications services are provided in accordance with all applicable NASA/MSFC procedural and regulatory guidance, Federal regulations such as 508 compliance, and Government Printing Office (GPO) requirements.

In building 4200, the Contractor provides a wide variety of products, including illustrations; animation; original certificate design and templates; charts, graphs, and tables; presentations; posters; banners; large format lamination/mounting on form core board; web page design; and matting services. The Contractor provides writing, editing, proofing, graphic design, layout, camera-ready art, and desktop publishing support for such products as brochures, publications, proposals, fact sheets, newsletters, annual reports, and Scientific and Technical Information (STI) publications. The Contractor provides Document Available Authorization (DAA) clearance and STI reprint services.

The graphics and publications services are provided in a Macintosh environment with G5 Intel Dual processors utilizing specialized software such as Adobe Suite, Flash, Dreamweaver, Lightwave, Acrobat, Microsoft Office, and CommonLook, etc. We have a growing workload in this area due to transitioning from Shuttle to Ares and Constellation Program implementation with 50% of the deadlines being 10 days or less. There are also some priority deadlines that require immediate and dedicated attention such as proposals, special events, VIP visits, etc.

Some of our publications such as journal articles, NASA series reports (Technical Reports, Technical Memorandums, Contractor Reports, and Conference Publications, etc.), vary from short deadlines to extended deadlines depending on page count. Some of these publications could be as large as 1,000 pages or as small as 8 pages. In addition to design, editing, and illustrating these STI documents, this area receives the manuscripts directly from the author and coordinates the production and printing to include the pdfs, CDs, and 508 documents. They also maintain a history log of manuscript drafts, notes, author instructions, etc. for each publication.

The Contractor provides computer analyst technical support to maintain the Graphics and Publications computer stations and peripherals in accordance with current Agency and Center Security and Operating System guidelines; to maintain software/hardware inventory; to research and recommend hardware/software for computer updates and replacements; and to be responsible for interfacing with the Documentation Repository

Services Team for verification of current working documents, logbook database, and archived graphics/publications files.

Collocated dedicated graphics services, support outreach activities via conference logistics for technology based industry briefings, as well as writing and editing services. Other collocated dedicated graphics/publications services provide technical writing, editing, and proofing services to the MSFC customers.

Government Furnished Equipment

The equipment in this area is government furnished equipment that is utilized by Graphics and Publications Services to provide the various products to the customers. Summarize equipment as we come to them.

Data Acquisition System at Test Area

OVERVIEW

The Data Acquisition Systems used in the East and West Test Areas consist of Low Speed Digital Data Acquisition Systems (a.k.a. DSUs) and High Speed Digital Acquisition System (HSDAS). All of these systems are operated from building 4583 (East Test Area) and building 4674 (West Test Area) where they can simultaneously support all of the active test stands within their respective areas. Each test stand co-locates a NEFF 620 Front End System (SIU), a High Speed Digital Acquisition System (NEFF 490/495), and various signal conditioning equipment which provides excitation, amplification, low pass filtering, and analog-to-digital conversion of each transducer measurement. Raw millivolt and engineering unit converted data is recorded by the DSU and distributed through network connections to the test stand control room and operations buildings for real time observation of measurements. The NEFF 490/495 records data directly to RAM boards and is down-loaded to a windows based PC after the test is completed.

INCUMBENT COMPANY

The incumbent company is responsible for providing DSU Operators as well as the overall maintenance of all DSUs located in the East and West Test Areas. The DSUs described in this document consist currently of DEC/COMPAQ/HP ALPHA systems running UNIX. The DSU Operators and Maintenance Personnel are responsible for, but not limited to, the operations of the DSU during all testing operations. DSU Operators and Maintenance Personnel are required to support any sub component and peripherals associated with the DSU and any related cabling, patching, electronic hardware design and construction of any support circuits. The incumbent company is required to move, re-locate and install software on any associated windows based PCs used for data processing, display, analysis, and archiving. The incumbent company is responsible for managing local Ethernet networks used to distribute the real-time data to the test stands.

The incumbent company is responsible for, but not limited to the maintenance of the NEFF 620 Front End System (SIU) co-located at all active test stands which includes the troubleshooting, repair, upgrading, and integrating any associated sub components that will improve or enhance its performance.

The incumbent company is responsible for providing HSDAS Operators as well as the overall Maintenance of all NEFF 490/495 systems located in the East and West Test Areas. The HSDAS Operators and maintenance personnel are responsible for, but not limited to the operations of the HSDAS during all testing operations. HSDAS Operators and Maintenance personnel are required to support any sub component and peripherals associated with the HSDAS and any related cabling, patching, electronic hardware design and construction of any support circuits, and networking.